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ABSTRACT

Two questions were the focus of this study. Do television network presentations of the same event significantly vary in their use of nonverbal production techniques? If they do differ, what effect do these differences have on receiver's attitude toward the object of that network coverage? Phase 1 of the study examined the speeches of Ted Kennedy and George McGovern at the 1972 Democratic National Convention as broadcast by CBS, NBC, and ABC. The video portions of the speeches were analyzed along four variables which had been previously found to affect receiver judgments: length of shot, image size, camera angle, and severity of camera angle. The differences found in camera treatment resulted in the hypothesis that different camera treatments would result in differential attitudes of receivers toward a televised political source. Phase 2 utilized 12 semantic differential scales for measuring four dimensions of source credibility. These were administered to approximately 240 college students enrolled in sections of an introductory communication course. Only one significant difference was found: Kennedy's extroversion was significantly lower for subjects who viewed the speech on CBS than for those who watched the same speech on NBC. Character and competence dimensions both collapsed. (HOD)

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THE EFFECT OF CAMERA TREATMENT ON POLITICAL SPEAKERS' CREDIBILITY: NETWORK TELEVISION COVERAGE OF THE SPEECHES OF TED KENNEDY AND GEORGE McGOVERN TO THE 1972 DEMOCRATIC NATIONAL CONVENTION

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The effect of visualization in television and film on receiver behavior has drawn increased attention in recent years. The majority of research in this area has focused on the effect of visual variables on student learning. By and large the weight of research evidence has found only scattered differences in information gain when differing visual treatments were employed. A detailed review of this body of research can be found elsewhere (Travers, 1970, Conway, 1967).

Another, though considerably smaller, body of research has focused on the non-cognitive effects of visual presentations on human behavior. The importance of these visual, nonverbal message variables has been noted by George Gerbner when he wrote:

> There are objective built-in elements (camera angle, juxtaposition, contexts, relative size, etc.) which form part of the basis along which pictures are perceived. We are not always aware of the existence or nature of these more subtle elements... Manipulation of these elements can, therefore, lead to changes in perception (meaning) with relatively little awareness of manipulation. (See Tannenbaum and Fosdich, 1964, p. 253)

Only a few scholars have addressed themselves to empirically delineating these important variables outside the learning context.

Tiemens (1970) studied the effect of camera angle on newscaster's credibility and found no significant differences. Chilberg (1972) and Wakshlag (1973) found higher camera angles to increase the credibility of speakers and student newscasters respectively. McCain and Repensky (1972) discovered that image size of camera shots differentially effected the mediated interpersonal attraction of two comedy performers. Williams (1964) found that interest levels of an instructional television program were effected both by type and patterns of shots employed in the program. Ksobiech's (1972) excellent study concluded that "the use of production techniques, which typically introduce visual, nonverbal content, would appear to influence student interest, attention, and motivation." (page 17).

The important point is that experimental studies have found significant effects produced by visual, nonverbal manipulations on receivers attitudes and interest.

The present study was concerned with two research questions. (1) Do television network presentations of the same event significantly vary in their use of nonverbal production techniques? (2) If they do differ, what effect do these differences have on a receiver's attitude towards the object of that network coverage?

PROCEDURES, PHASE I.

The speeches of Ted Kennedy and George McGovern to the 1972 Democratic National Convention in Miami Beach were simultaneously video tape recorded as they were broadcast by the three major television networks (CBS, NBC, ABC). One-half inch Sony video tape equipment in the Communication Research Center at Illinois State University was utilized for all aspects of the study. The audio portion of these speeches was identical on the three networks, for they

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all used the "pool" audio microphone. The visual portion varied from network to network, since each network was responsible for directing its own coverage. (This in spite of the fact that three of the camera shots available at any one time to each network were "pool cameras" and were identical.)

The video portions of these six treatments were analyzed along four visual variables which had been previously found to effect receiver judgments. They were length of shot, image size, camera angle, severity of camera angle.

Operational Definitions

Length of shot was tabulated on the basis of seconds and hundredths of seconds by a stop watch. The time span of a shot was considered terminated when an electronic edit occurred or when a zoom was completed. Thus the transitional portion of all zooms was categorized as belonging to the initial image size rather than the image size at the zoom's completion.

Image size was categorized according to close-ups, medium shots, long shots and extreme long shots.

Close-ups were those shots of audience or speaker from the shoulders upward.

Medium shots were those shots revealing audience or speaker from the waist upward.

Long shots were those shots of audience or speaker revealing their full figure.

Extreme long shots were cover shots of the speaker or audience.

Camera angle was the deviation of camera shots from eye level on a vertical plane.

Low angle shots were those shots of audience or speaker shooting upward (usually taken from cameras on the convention floor).

High angle shots were those shots of audience or speaker shooting downward (usually taken from the camera platform at the rear of the convention floor).

Severity of Camera Angle was the degree to which camera shots deviated (either high or low) from eye level.

Subtle angles were those camera shots whose deviation from eye level was barely perceptible (approximately 5 degrees).

Moderate angles were those camera shots which were obvious deviations from eye level, but did not necessarily call attention to themselves (approximately 10 degrees).

Extreme camera angles were those shots which grossly deviated from eye level, often calling attention to themselves (more than 20 degrees).

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The shot analysis was performed by two students enrolled in an upper division mass communication class under the supervision of the author. A manuscript of the two speeches was transcribed from the audio portion of one of the video tapes. The two raters reached consensus on all camera shot classifications by stopping and re-starting the video tapes at each edit. A script which included each edit and categorization of each shot was prepared from the above procedures.

DATA ANALYSIS, PHASE I

Differences between the three networks in the number of shots, image size, camera angles, and angle severity were tested by constructing separate contingency tables for these observations.

The chi-square statistic was employed to test for differences between the three networks for these observations. The .05 level of confidence was required in order to reject the null hypothesis of no difference.

RESULTS, PHASE I

Table 1 indicates the differences between the networks in terms of the number of shots used during the two speeches. The most striking difference is that ABC used significantly fewer total shots (168) than either CBS (208) or NBC (207). Further, NBC used proportionately fewer close-ups (30%) and more long shots (29%) than either ABC (42% - 22%) or CBS (45% - 18%).

The differences between the three networks' use of high and low camera angles is presented in Table 2. NBC relied on higher camera angles (71%) more than did either CBS (59%) or ABC (48%). Both NBC and CBS used more high camera angles than low angles, while ABC used approximately the same number of high and low angles.

Table 3 reports the differences between the networks according to the severity of the camera angles. The three networks all relied on the subtle angles more than moderate or extreme angles. This was particularly true of close-ups, since the severity of close-ups was most difficult to detect. NBC used proportionately more extreme angle shots (either high or low) than either CBS or ABC. NBC relied on the moderate angles less than the other two networks.

It was found that there were no significant differences between the three networks in the amount of time they spent on each of the shot types. The networks did vary in terms of the number of shots they used as is evidenced in Table 1. The mean times each of the networks spent on close-ups, medium shots, long shots, and extreme long shots was cross tabulated by network and no significant relationship was found for either Kennedy or McGovern.

The subject matter of each shot was also classified, but is not reported here. The purpose of this shot analysis was simply to demonstrate that the networks represented the "same" event using different visual presentations.

The fact that the time differences for shots did not significantly vary across the networks suggests that the sequencing of shots was the primary

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variation. Although the networks had approximately the same shots available to them, they chose to use them in differing patterns. The cutting rate can only be implied from the total number of shots each network used. It would appear that NBC (207 shots) and CBS (208 shots) used a more rapid cutting rate than did ABC (168 shots). It is quite remarkable that the NBC and CBS directors were almost identical in the total number of shots used.

PHASE II

The differences found in the shot content analysis of the three networks presentations of the Kennedy and McGovern speeches, and previous research which suggests that variation in camera treatment effects receiver judgments of sources, led to the following hypothesis: Different camera treatments will result in differential attitudes of receivers toward a televised political source.

Operational Definitions

Independent Variable -- Camera treatment. The camera treatments were the six video-taped speeches of the speeches of Kennedy and McGovern to the Democratic National Convention. (Three networks for both speakers.)

Dependent Variable -- Source credibility. Source credibility was defined as S's attitude toward a political speaker after viewing a televised speech for the dimensions of credibility, as measured by semantic differential scales.

MEASUREMENT - PHASE II

Twelve semantic differential scales were utilized for measuring four dimensions of source credibility. McCroskey, Jensen and Todd's (1972) scales for public figures from the Illinois State University sample were utilized. The competence dimension was represented by: intelligent - unintelligent, trained - untrained, and informed - uninformed. The composure dimension included: nervous - poised, tense - relaxed, and calm - anxious. The character dimension was represented by: honest - dishonest, good - bad, and reliable - unreliable. Scales representing the extroversion dimension included: meek - aggressive, verbal - quiet, and talkative - silent.

All scales were randomly listed on the measuring instrument with polarity randomly assigned to decrease the possibility of S's response set.

Credibility scores were computed by summing across the values of each scale which represented the independent dimensions of source credibility as determined by factor analysis.

PROCEDURES, PHASE II

Subjects

S's were students enrolled in six sections of the introductory communication course at Illinois State University during the fall semester of 1972-73. Each section had approximately 40 students who viewed one of the political speakers as presented by a single network. Students were predominately sophomores.

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Data Collection

The same experimentor administered the test to all S's in a classroom setting. The stimulus message was introduced as an important speech which they would discuss in class. The video tape was then played. After viewing the speech, S's were instructed to respond to the 12 semantic differential scales in the measurement booklet after carefully reading the instructions.

DATA ANALYSIS, PHASE II

Factor Analysis

Principal components factor analysis with varimax rotation was utilized for testing the measuring instrument. An eigenvalue of 1.0 was established as the criterion for termination of factor extraction. For an item to be considered loaded on a resulting factor, a loading of .60 or higher was required with no loading of .40 or higher on any other factor. For a factor to be considered meaningful, it was required that at least two items be loaded on the factor.

Analysis of Variance

The data was originally intended to be analyzed by a two-way analysis of variance with three levels of camera treatment (three networks) and two levels of speakers (McGovern and Kennedy). Preliminary analysis of data indicated that the within group variance associated with McGovern was significantly different than the within group variance associated with Kennedy. Since the experimentor intended to use the speakers for control purposes and given the obvious disproportionality of the within group variance, it was decided to analyze each speaker independently in a one-way analysis of variance design.

The .05 level of confidence was required for interpretation. When significant F ratios were obtained, two tailed t tests were utilized.

RESULTS, PHASE II

Factor Analysis

The factor analysis of the 12 source credibility scales resulted in a three-factor solution reported in Table 4. The three factors accounted for 64 percent of the total variance. Factor I had five scales with acceptable loadings and was labeled leadership. This factor included the three scales originally included to tap the character dimension and two of the three scales which were designed for the competence dimension of source credibility. A third competence scale trained - untrained split its loading between Factor I and Factor III.

Factor II had three scales with acceptable loadings and was labeled extroversion. The three scales were those originally included for the extroversion dimension of source credibility.

Factor III also had three scales which met the factor analysis criteria and was labeled composure. The scales on this factor were the same as those which were included to tap the composure dimension of credibility.

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Analysis of Variance

The results of the one-way analysis of variance for the dimensions of source credibility for McGovern are reported in Table 5. The means of the dimension scores for the three network treatments are reported in Table 6. An F ratio of 3.07 was needed in order to reject the null hypothesis. No significant differences were found for any of the three dimensions for McGovern.

The summary results of the one-way analysis of variance for Kennedy are reported in Table 7. Table 8 reports the mean scores for the three dimensions for the three network treatments. An F ratio of 3.00 was necessary in order to reject the null hypothesis $p<.05$. Significant differences on the extroversion dimension were discovered. Kennedy's extroversion mean score for the CBS treatment (18.1) was significantly less than for the NBC treatment (19.3); $t = 2.65$. No other significant differences were discovered.

DISCUSSION

The factor structure for the dimensions of source credibility is not entirely consistent with previous credibility research. McCroskey (1972) notes, however, that the dimensions and scales to tap the dimensions of credibility vary from context to context. The fact that the character and competence dimensions both collapsed here is not at all illogical. It may well be that a national political figure's competence is inextricably woven into the fabric of his character. The trend in campaigning has long been to stress a candidate's honesty, reliability and goodness along with his intelligence and training. The importance of the character component of this leadership dimension is evidenced by the high factor loadings of the three character scales. The competence scales were not as highly correlated.

The most important distinction to be made of this factor analysis is that it represents an indication of derived credibility. The scales which were used in this research were originally generated to tap dimensions of initial credibility. S's in a variety of settings responded only to the names of known public figures having had no exposure to a message (McCroskey, et al., 1972). The differences between factor structures of initial and derived credibility of public figures is an important issue for future research.

Only one significant difference was found between the six network treatments. Kennedy's extroversion was significantly lower for S's who viewed the speech on CBS than for those who watched the same speech on NBC.

That extroversion and not composure or leadership were affected by the network treatments is both puzzeling and comforting. There is no particular evidence in the shot analysis which assists in explaining why CBS's coverage should have affected Kennedy's extroversion. A more careful examination of the CBS coverage may uncover reasons which are currently unexplainable.

From a researcher's point of view, the finding of N.S.D. for the majority of the hypothesis is frustrating. But had the hypothesis been confirmed across all dimensions, the implications of this research could have been extrapolated far beyond the hypothesis tested. As a consumer of network television coverage, it would be more than casually disturbing to

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discover that mere shot selection could graphically affect attitudes toward political figures who lead the country.

Caution is suggested in interpreting the findings here. This examination of the effect of visual treatments on source credibility appears to have been premature. We simply do not know enough about individual visual variables as they operate in the mediated communication process. We may not conclude from the evidence presented here that network presentations have limited effect on source credibility. In fact, the only knowledge claim that can be made is that network camera treatments appear to affect some political figures' extroversion differentially.

TABLE 1
Total Number of Shots Used During
Kennedy and McGovern Speeches
by the three Networks

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	NBC		CBS		ABC	
Close-ups	(62)	30%	(93)	45%	(71)	42%
Medium Shots	(32)	15	(25)	12	(21)	13
Long Shots	(59)	29	(37)	18	(37)	22
Extreme L.S.	(54)	26	(50)	24	(36)	21
Total	(207)	100%	(208)	100%	(168)	100%

Chi-square = 14.46, 6 dif., Sig. $<.05$.

TABLE 2
Camera Angles Used During
Kennedy and McGovern Speeches
by the three Networks

	NBC		CBS		ABC	
Low Angles	(61)	29%	(86)	41%	(88)	52%
High Angles	(146)	71	(122)	59	(80)	48
Total	(207)	100%	(208)	100%	(168)	100%

Chi-square = 20.38, 2 d.f., Sig. $<.05$

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TABLE 3
Severeness of Camera Angle Used During
Kennedy and McGovern Speeches
by the three Networks

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	NBC	CBS	ABC
Subtle Angles	(81) 39%	(89) 43%	(69) 41%
Moderate Angles	(51) 25	(76) 37	(56) 33
Extreme Angles	(75) 36	(43) 21	(43) 26
Total	(207) 100%	(208) 100%	(168) 100%

Chi-square = 14.79, 4 d.f., Sig. < .05

TABLE 4
Rotated Factor Loadings for Source Credibility
Semantic Differential Scales

	I Leadership**	II Extroversion	III Composure
1. Intelligent-Unintelligent	- .63*	- .10	- .16
2. Dishonest-Honest	.85*	- .01	.08
3. Good-Bad	- .87*	- .05	- .07
4. Uninformed-Informed	.69*	.17	.19
5. Reliable-Unreliable	- .88*	- .02	- .14
6. Trained-Untrained	.46	.33	.43
7. Verbal-Quiet	- .04	- .85*	- .03
8. Talkative-Silent	- .05	- .81*	.01
9. Meek-Aggresive	.15	.67*	.13
10. Tense-Relaxed	.15	.14	.82*
11. Nervous-Poised	.19	.22	.80*
12. Calm-Anxious	- .10	.34	- .65*
Cumulative Variance	35%	51%	64%

*Indicates scales which met criteria
**Leadership dimension represents collapsed competence and character scales into a single factor.

TABLE 5
Summary of One-Way Analysis of Variance of McGovern
for the Dimensions of Source Credibility

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Source of Variance	df	SS	MS	F
LEADERSHIP				
Between	2	94.27	47.13	.96
Within	114	5506.66	48.30	
Total	116	5600.92		
EXTROVERSION				
Between	2	25.77	12.88	1.35
Within	114	1088.15	9.55	
Total	116	1113.91		
COMPOSURE				
Between	2	37.96	18.98	1.50
Within	114	1446.16	12.69	
Total	116	1484.12		

TABLE 6
Mean Source Credibility Scores for McGovern
for the three Networks*

Dimension	Network		
	NBC	CBS	ABC
Leadership	25.3	23.3	23.5
Extroversion	17.7	17.2	16.6
Composure	13.3	13.0	12.0

*Potential range of scores on leadership dimension was from 5 to 35; for extroversion and composure 3 to 21.

TABLE 7
Summary of One-Way Analysis of Variance of Kennedy
for Dimensions of Source Credibility*

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Source of Variance	df	SS	MS	F
LEADERSHIP				
Between	2	77.56	38.78	1.18
Within	124	4087.32	32.96	
Total	126	4164.88		
EXTROVERSION				
Between	2	33.14	16.57	3.56*
Within	124	576.66	4.65	
Total	126	609.80		
COMPOSURE				
Between	2	8.45	4.22	.30
Within	124	1738.17	14.02	
Total	126	1746.61		

*Indicates significant F ratio, $p. < .05$

TABLE 8
Mean Source Credibility Scores for Kennedy
for the three Networks*

Dimension	Network NBC	CBS	ABC
Leadership	26.3	24.5	26.0
Extroversion	19.3_a	18.1_a	18.8
Composure	14.7	15.3	14.8

*Means on same credibility dimension with same subscript are significantly different, $p < .05$. Potential range of scores on leadership was from 5 to 35; for extroversion and composure from 3 to 21.

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